* Random variable → Discrete Random variable
→ Continuous Random variable

① Discrete Random variable :-
Whole number, Not floating number
Eg :- ① No. of bank accounts a person has → 2, 5, 6, etc
② population of state → 1 million, 2 million., etc

② Continuous Random variable :-
- Within a range of values we can have any value
e.g. 10 to 15 is range
→ 10, 10.2, 14.9, 13, 12.5, etc
- It can be whole number, or decimal value.

Discrete & Continuous sample Spaces

- Sample space is the set of all the possible outcomes of a random experiment.
- It can be of two types.

① **Discrete sample space :-**

e.g ① Number of people attending the meeting can be bet^n 10 and 20 = {10, 11, 12 ..... 20}

② Rolling of a 6 faced die
S = {1, 2, 3, 4, 5, 6}

③ In the next two weeks, we will record the no. of days it will rain
S = {0, 1, 2, ... 11}

② **Continuous sample space :-**

e.g ~~① Number of people at~~
① value of stock for a company can be bet^n $15 and $25 = {15.01, 15.02, 24.99 ..... 25}

② The output voltage of an electric generator is bet^n 220V & 240V
S = {220, 220.001, 220.1, 220.6, ... 240}

③ We record the speed at which each car is going on a highway that has a speed limit of 70mph
S = [0, 70 mph]